

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

SUCXESS LLC, Plaintiff, v. COMMA.AI, INC., Defendant.	Case No. 22-cv-1105-MN Hon. Maryellen Noreika Jury Trial Demanded
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AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Sucxess LLC, by and through the undersigned counsel, files this Amended Complaint for patent infringement against Defendant comma.ai, Inc., and in support states:

Parties

1. Plaintiff Sucxess LLC (“Sucxess”) is a limited liability company organized and existing under the laws of the State of Michigan and having its principal place of business in Birmingham, Michigan.

2. Defendant comma.ai, Inc. (“comma.ai”) is a corporation organized and existing under the laws of the State of Delaware and having a place of business in San Diego, California. comma.ai’s registered agent is Incorporating Services, Ltd., 3500 South DuPont Hwy., Dover, Delaware 19901.

Jurisdiction and Venue

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is a corporation organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b).

The '116 Patent

6. U.S. Patent No. 11,153,116 (the “'116 Patent”) was duly and legally issued on October 19, 2021. A true and correct copy of the '116 Patent is attached as **Exhibit A**.

7. Success is the assignee of all right, title, and interest in and to the '116. It has the exclusive right to prosecute the present action for infringement of the patent.

8. The '116 Patent is valid and enforceable.

9. The '116 Patent discloses a unique apparatus for retrofitting vehicles, including vehicles retrofitted as autonomous vehicle prototypes.

10. Defendant has been aware of the '116 Patent and its infringement of the '116 Patent since no later than June 16, 2022, when Defendant received a letter from Plaintiff identifying the patent and setting forth its infringement allegations.

11. The requirements of 35 U.S.C. § 287(a) are satisfied at least because Defendant received actual notice of the '116 Patent and its infringement on June 16, 2022.

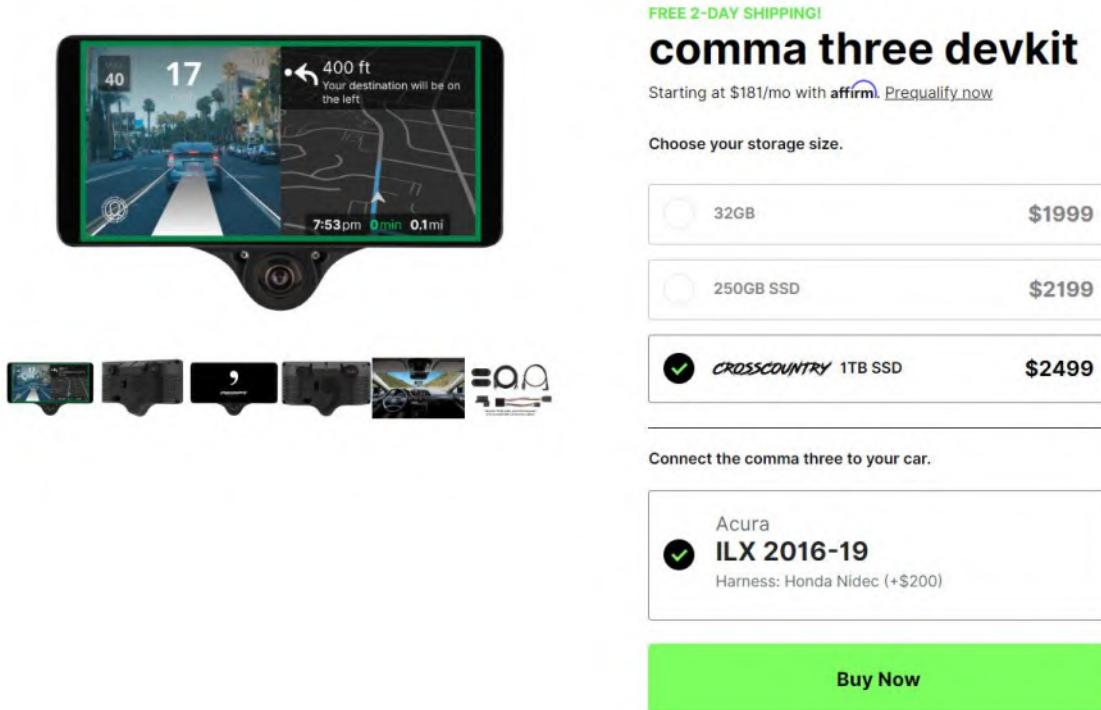
Count I – Infringement of the '116 Patent

12. Plaintiff restates and incorporates by reference the foregoing allegations.

13. Comma has infringed, and is still infringing, the '116 Patent by making, using, offering to sell, or selling in the United States, or importing into the United States, comma.ai devkits, including the comma two and comma three devkits (the “Accused Kits”).

14. The Accused Kits meet the limitation of claim 1 of the '116 Patent at least as follows:

a. Claim 1 describes “[a] retrofit apparatus for installation in an existing vehicle.” The Accused Kits are aftermarket driver assistance kits (“retrofit apparatuses”) that are installed in existing vehicles. The Accused Kits are sold for installation in 200+ models of vehicles. This is illustrated by the following:



1

OPENPILOT SUPPORTS 200+ VEHICLES

A supported vehicle is one that just works when you install a comma three. All supported cars provide a better experience than any stock system.

2

b. The apparatus in claim 1 comprises “a control processor.” The Accused Kits include a module with a STM32F413 or STM32H725 control processor. This is illustrated by the following:

¹ <https://comma.ai/shop/products/three>

² <https://comma.ai/vehicles>

Hardware

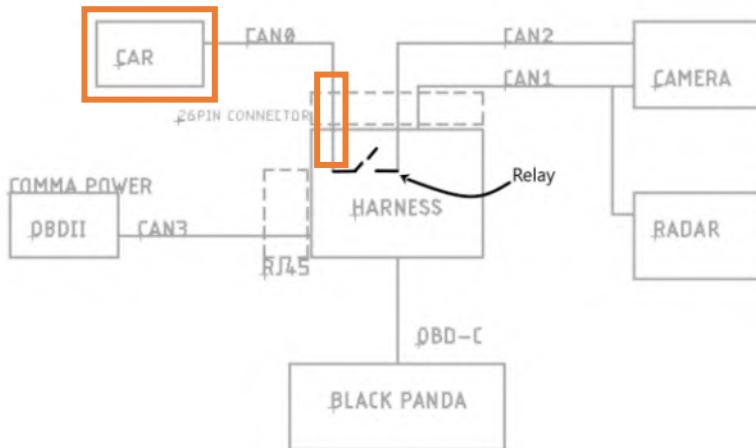
To run openpilot you need some compute and a panda to interface with the vehicle. openpilot now supports three hardware platforms: [comma two](#), [comma three](#) (both of which have an integrated panda), and a Linux PC (requires a [separate panda](#)). The comma two runs [NEOS](#), our stripped down Android fork, while the comma three runs [AGNOS](#), our new Ubuntu-based operating system. We also launched the [red panda](#), the future of the panda platform. It supports CAN-FD and has a 4x faster CPU.

3

The Black Panda and Uno use the same [microprocessor](#) as the older White and Grey Pandas: The STM32F413. A quick look at the spec sheet reveals that

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c. The apparatus in claim 1 further comprises “a first vehicle data bus terminal for electrically connecting the retrofit apparatus to a first factory-installed apparatus.” The Accused Kits include a 26 pin connector. Pins 4 and/or 6, labeled “CAN0,” connect the retrofit apparatus to the vehicle’s power steering control module or powertrain control module, i.e., the “first factory-installed apparatus.” This is illustrated by the following:



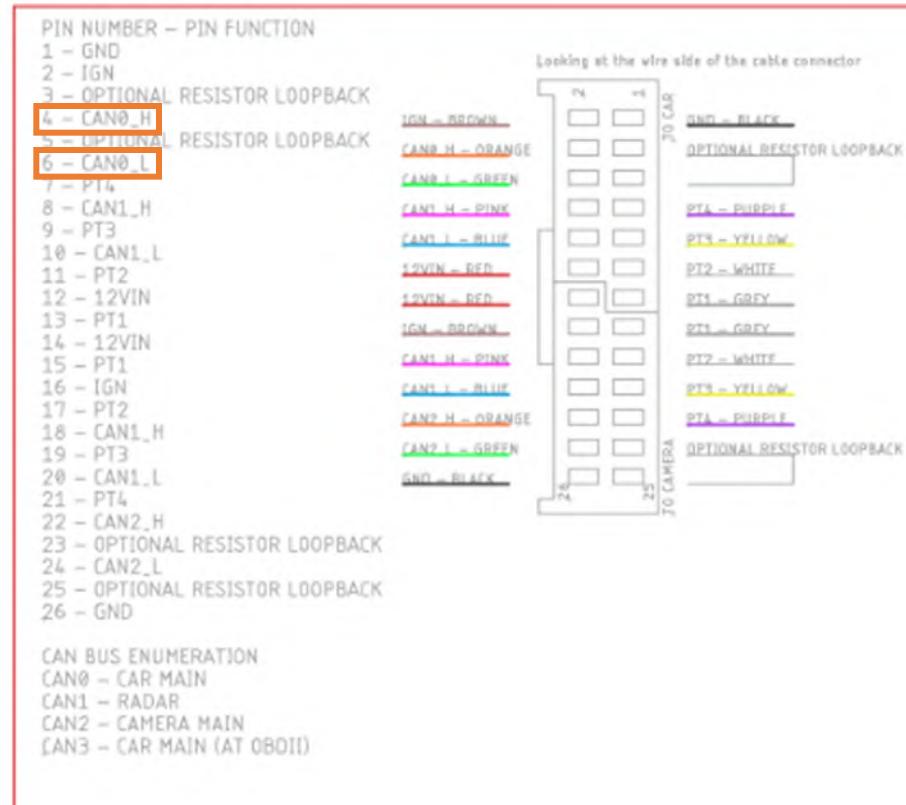
CAN Network Topology with Car Harness

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³ <https://blog.comma.ai/openpilot-in-2021/>

⁴ <https://wirelessnet2.medium.com/bitbanging-can-rx-on-black-panda-and-uno-bf815890bfb7>

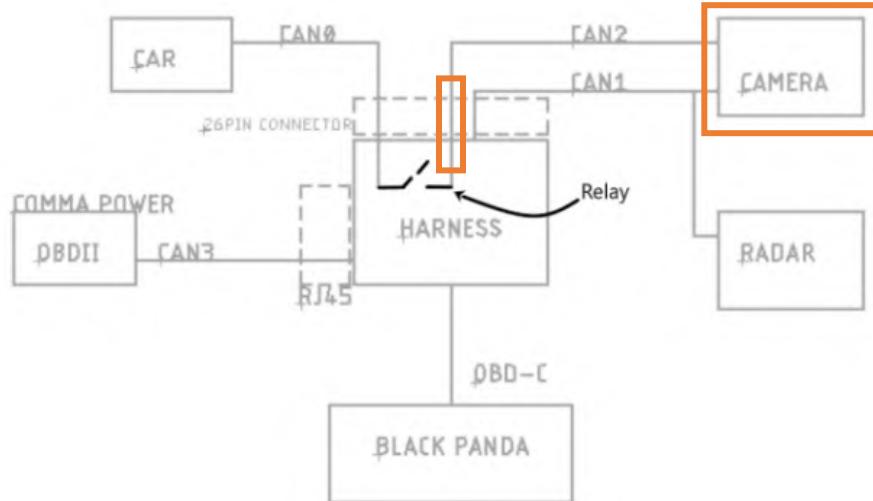
⁵ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>



6

d. The apparatus in claim 1 further comprises “a second vehicle data bus terminal for electrically connecting the retrofit apparatus to a second factory-installed apparatus.” Pins 22 and 24 of the Accused Kit’s connector, labeled “CAN2,” connect the retrofit apparatus to the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus.” This is illustrated by the following:

⁶ <https://blog.comma.ai/our-hardware-future/>



CAN Network Topology with Car Harness

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PIN NUMBER – PIN FUNCTION	
1	GND
2	IGN
3	OPTIONAL RESISTOR LOOPBACK
4	CAN0_H
5	OPTIONAL RESISTOR LOOPBACK
6	CAN0_L
7	PT4
8	CAN1_H
9	PT3
10	CAN1_L
11	PT2
12	12VIN
13	PT1
14	12VIN
15	PT1
16	IGN
17	PT2
18	CAN1_H
19	PT3
20	CAN1_L
21	PT1
22	CAN2_H
23	OPTIONAL RESISTOR LOOPBACK
24	CAN2_L
25	OPTIONAL RESISTOR LOOPBACK
26	GND
CAN BUS ENUMERATION	
CAN0 – CAR MAIN	
CAN1 – RADAR	
CAN2 – CAMERA MAIN	
CAN3 – CAR MAIN (AT OBDII)	

Looking at the wire side of the cable connector

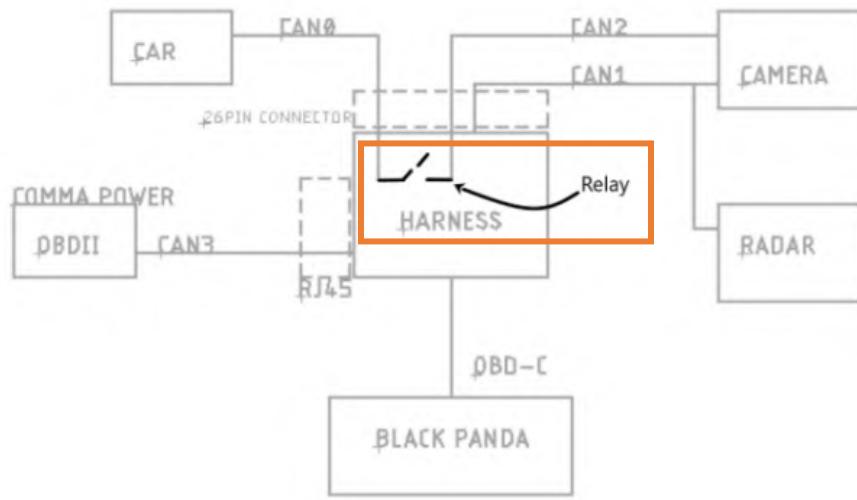
Pin	Color	Function
1	BROWN	IGN
2	ORANGE	CAN0_H
3	GREEN	CAN0_L
4	PINK	CAN1_H
5	BLUE	CAN1_L
6	RED	12VIN
7	RED	12VIN
8	BROWN	IGN
9	PINK	CAN1_H
10	BLUE	CAN1_L
11	ORANGE	CAN2_H
12	GREEN	CAN2_L
13	BLACK	GND
14	BLACK	GND
15	BLACK	OPTIONAL RESISTOR LOOPBACK
16	PURPLE	PT4
17	YELLOW	PT3
18	WHITE	PT2
19	GREY	PT1
20	GREY	PT1
21	WHITE	PT2
22	YELLOW	PT3
23	PURPLE	PT1
24	BLACK	OPTIONAL RESISTOR LOOPBACK
25	BLACK	GND
26	BLACK	GND

8

⁷ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

⁸ <https://blog.comma.ai/our-hardware-future/>

e. The apparatus in claim 1 further comprises “an electromechanical relay operatively connected to and controlled by the control processor, the relay being configured to selectively connect the first vehicle data bus terminal to the second vehicle data bus terminal.” The Accused Kits include an electromechanical relay operatively connected to and controlled by the STM32F413 or STM32H725 control processor. The relay is configured to selectively connect the first vehicle data bus terminal to the second vehicle data bus terminal. The state of the relay is selected by software executed in the STM32F413 or STM32H725 control processor. This is illustrated by the following:



CAN Network Topology with Car Harness

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This is the car harness. It sits in between your car's existing ADAS camera and the rest of the car, and allows, by default, passive pass through operation. The harness uses advanced relay technology to only break the pass through when the software says it's ready.

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⁹ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

¹⁰ <https://comma-ai.medium.com/our-hardware-future-eea980d8c3bd>

```

172     // C10: OBD_SBU1_RELAY (harness relay driving output)
173     // C11: OBD_SBU2_RELAY (harness relay driving output)
174     set_gpio_mode(GPIOC, 10, MODE_OUTPUT);
175     set_gpio_mode(GPIOC, 11, MODE_OUTPUT);
176     set_gpio_output_type(GPIOC, 10, OUTPUT_TYPE_OPEN_DRAIN);
177     set_gpio_output_type(GPIOC, 11, OUTPUT_TYPE_OPEN_DRAIN);
178     set_gpio_output(GPIOC, 10, 1);
179     set_gpio_output(GPIOC, 11, 1);

```

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f. Claim 1 further requires that “an original data bus message originating in the second factory-installed apparatus reaches the first factory-installed apparatus when the relay connects the first vehicle data bus terminal to the second vehicle data bus terminal.” In “Passthrough Mode,” the relay in the Accused Kits directly connects the vehicle’s factory-installed power steering control module or powertrain control module, i.e., the “first factory-installed apparatus,” to the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus.” In Passthrough Mode, an original data bus message originating in the factory-installed camera reaches the factory-installed power steering control module or powertrain control module. This is illustrated by the following:

(unmodified) operation of the vehicle. This relay is a safety feature: When OpenPilot is not active, the relay defaults to a physically closed state, directly connecting the factory camera to the car main CAN and making the OpenPilot hardware invisible to the car. If the hardware were to crash or lose power, the relay would again default to a closed state. This physically closed state is called Passthrough Mode as signals are directly passed between the car and the factory camera with no intervention. The relay only opens and enters what’s

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g. Claim 1 further requires that “the original data bus message originating in the second factory-installed apparatus does not reach the first factory-installed apparatus when the

¹¹ <https://github.com/commaai/panda/blob/master/board/boards/uno.h>, accessed 06-Oct-2022

¹² <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

relay disconnects the first vehicle data bus terminal from the second vehicle data bus terminal.” When the Accused Kits operate with its OpenPilot feature active, the relay disconnects the vehicle’s factory-installed power steering control module or powertrain control module, i.e., the “first factory-installed apparatus,” i.e., from the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus,” such that an original data bus message originating in the factory-installed camera does not reach the factory-installed power steering control module or powertrain control module. This is illustrated by the following:

factory camera with no intervention. The relay only opens and enters what's called Intercept Mode when the driver enables OpenPilot and the system has passed all of its internal health and safety checks. When the relay is physically open, the factory ADAS camera is isolated onto its own CAN bus and the Black Panda is performing selective forwarding and message injection to allow OpenPilot to control the car (just like with the white and grey pandas). The relay works in conjunction with stringent software-enforced safety code to ensure that the safe operation of a vehicle is never compromised.

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h. Claim 1 finally requires that “the retrofit apparatus transmits a mimicked data bus message to the first factory-installed apparatus.” When OpenPilot is active, the Accused Kits transmit mimicked data bus messages to the factory-installed power steering control module or powertrain control module, i.e., the “first factory-installed apparatus.” For example, the mimicked data bus messages include a vehicle acceleration CAN message or equivalent message. This is illustrated by the following:

¹³ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

car. To get around this, we can place the factory ADAS camera on its own isolated CAN bus and selectively forward messages between it and the car main CAN bus while injecting custom messages when needed. With this configuration, the OpenPilot computer can mimic the CAN ID of the factory ADAS camera when sending steer, brake, and accelerate commands to the car so the car thinks the factory camera is sending the messages.

14

15. Claim 4 depends from claim 1 and further requires that the “electromechanical relay is normally closed, thereby electrically connecting the first vehicle data bus terminal to the second vehicle data bus terminal when the retrofit apparatus is not powered.” The relay in the Accused Kits defaults to a closed state, i.e., it is normally closed, thereby electrically connecting the first vehicle data bus terminal to the second vehicle data bus terminal. This is illustrated by the following:

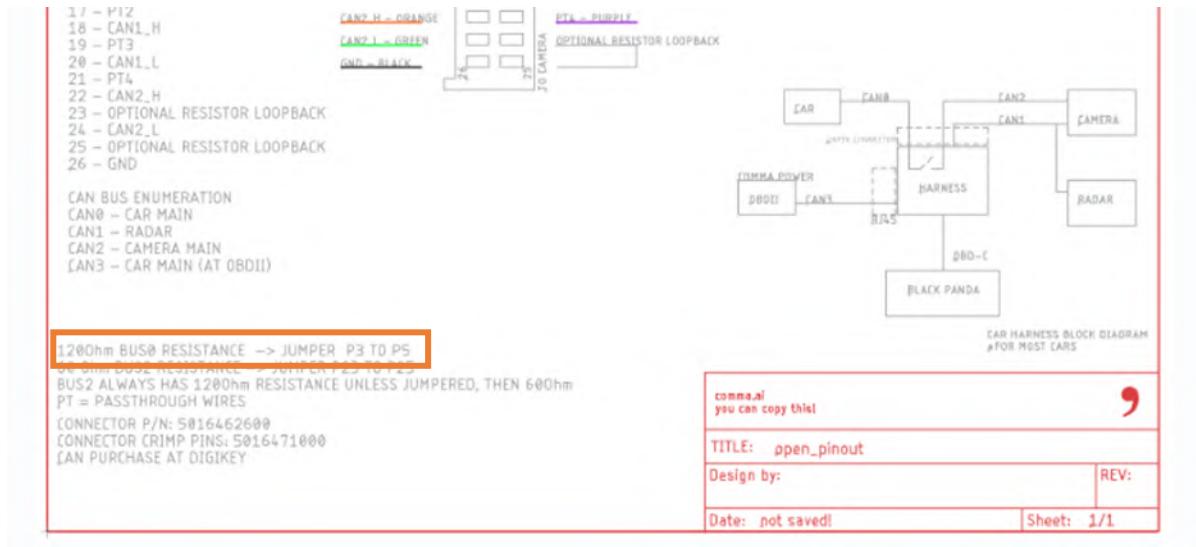
(unmodified) operation of the vehicle. This relay is a safety feature: When OpenPilot is not active, the relay defaults to a physically closed state, directly connecting the factory camera to the car main CAN and making the OpenPilot hardware invisible to the car. If the hardware were to crash or lose power, the

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16. Claim 8 depends from claim 1 and further requires that the apparatus described therein comprises a “network termination element electrically connected to the first vehicle data bus terminal.” Claim 9 depends from claim 1 and further requires that “the network termination element is a resistor.” The Accused Kits include a network termination element electrically connected to the first vehicle data bus terminal. This is illustrated by the following, where BUS0 is the first vehicle data bus terminal and is a 120 Ohm BUS0 resistance, i.e., a resistor:

¹⁴ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

¹⁵ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>



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17. Claim 11 depends from claim 1 and requires that “the retrofit apparatus is configured to prevent a message collision between the data bus message originating in the second factory-installed apparatus and the mimicked data bus message.” The Accused Kits prevent a message collision between a message originating from the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus,” and the mimicked data bus message. This is illustrated by the following:

passing the message on. As stated earlier, every ECU on a CAN network can “hear” all messages sent on the bus, so if we want to perform selective filtering and inject our own commands onto the bus, we cannot leave the source ECU (in this case, the factory ADAS camera) connected to the CAN network, or else the other ECUs on the network will hear both the filtered and unfiltered messages, defeating the selective filtering process and causing the OpenPilot computer and the factory ADAS camera to fight for control of the car. To get around this, we can place the factory ADAS camera on its own isolated CAN bus and selectively forward messages between it and the car main CAN bus while injecting custom messages when needed. With this

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¹⁶ <https://blog.comma.ai/our-hardware-future/>

¹⁷ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

18. Claim 12 depends from claim 11 and further requires that the retrofit apparatus “transmits the mimicked data bus message only after the factory-installed first apparatus and the factory-installed second apparatus have been electrically disconnected from one another.” The Accused Kits transmit the mimicked message only after the only after the factory-installed first apparatus and the factory-installed second apparatus have been electrically disconnected from one another. This is illustrated by the following:

```

221     int bus_rdr_car = (honda_hw == HONDA_BOSCH) ? 0 : 2; // radar bus, car side
222     bool stock_ecu_detected = false;
223
224     if (safety_mode_cnt > RELAY_TRNS_TIMEOUT) {
225         // If steering controls messages are received on the destination bus, it's an indication
226         // that the relay might be malfunctioning
227         if ((addr == 0xE4) || (addr == 0x194)) {
228             if (((honda_hw != HONDA_NIDEC) && (bus == bus_rdr_car)) || ((honda_hw == HONDA_NIDEC) && (bus == 0))) {
229                 stock_ecu_detected = true;
230             }
231         }

```

18

19. In another example, the Accused Kits meet the limitation of claim 15 of the '116 Patent at least as follows:

a. Claim 15 describes “[a] retrofit apparatus for installation in an existing vehicle.” Comma’s devkits are aftermarket driver assistance kits (“retrofit apparatuses”) that are installed in 200+ models of existing vehicles. This is illustrated by the following:

¹⁸ https://github.com/commaai/panda/blob/master/board/safety/safety_honda.h



FREE 2-DAY SHIPPING!

comma three devkit

Starting at \$181/mo with [affirm](#). [Prequalify now](#)

Choose your storage size.

<input type="radio"/>	32GB	\$1999
<input type="radio"/>	250GB SSD	\$2199
<input checked="" type="radio"/>	CROSSCOUNTRY 1TB SSD	\$2499

Connect the comma three to your car.

<input checked="" type="checkbox"/>	Acura ILX 2016-19 Harness: Honda Nidec (+\$200)
-------------------------------------	---

[Buy Now](#)

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OPENPILOT SUPPORTS 200+ VEHICLES

A supported vehicle is one that just works when you install a comma three. All supported cars provide a better experience than any stock system.

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b. The apparatus in claim 15 comprises “a power supply connected to the vehicle’s power distribution system through a vehicle battery terminal and a vehicle ground terminal.” On information and belief, the Accused Kits include electronic components that form a power supply connected to the vehicle’s power distribution system through a vehicle battery terminal and a vehicle ground terminal. This is supported by the following:

¹⁹ <https://comma.ai/shop/products/three>

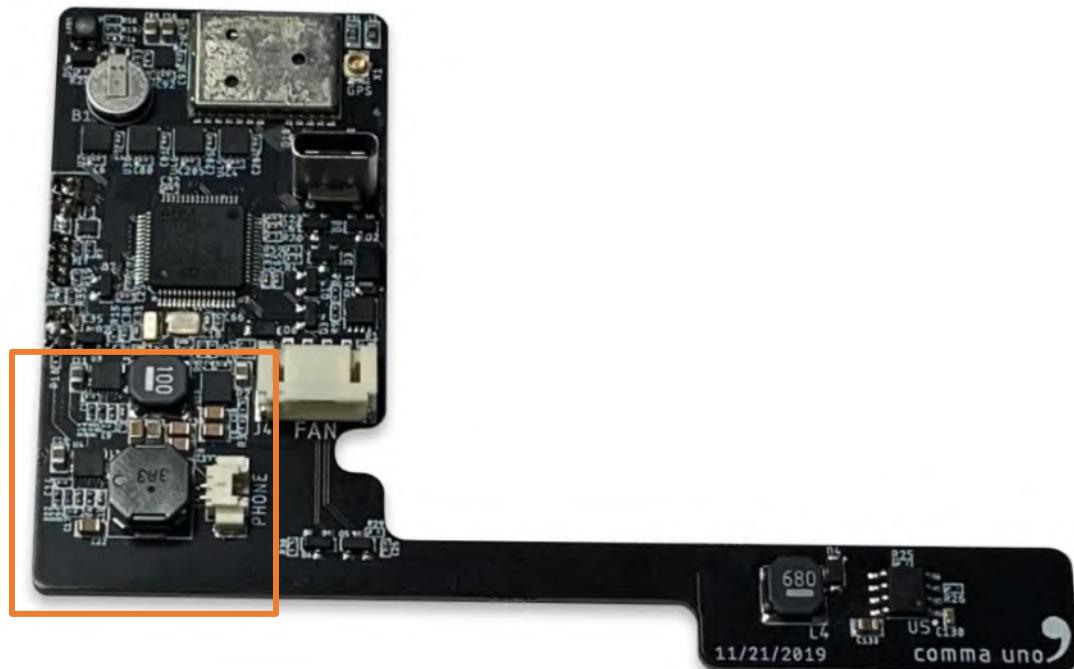
²⁰ <https://comma.ai/vehicles>



Use your car's OBD-II port to power your car harness. Does not come with an ethernet cable.

A comma power is included with a purchase of a car harness.

Free US shipping, \$30 flat rate internationally.



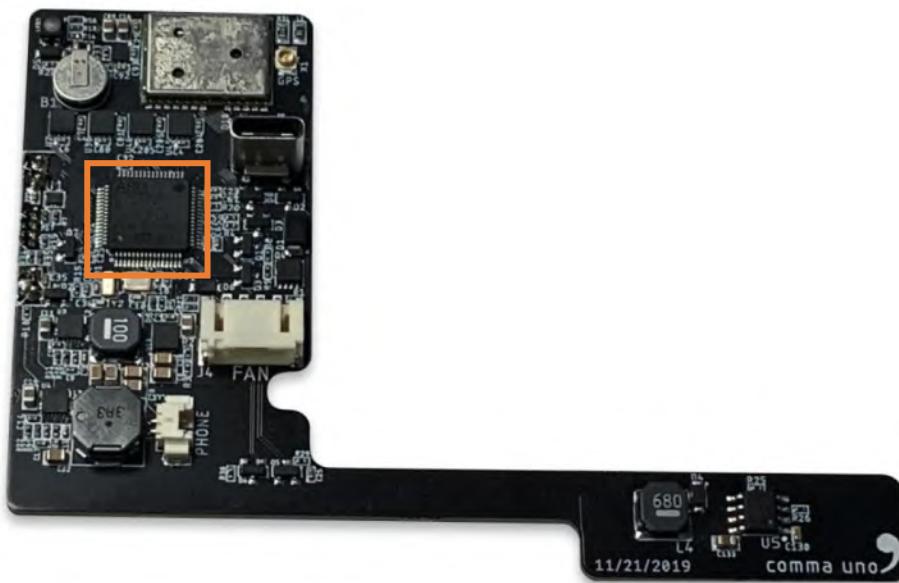
21

²¹ <https://comma.ai/shop/products/comma-three-logic-board>



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c. The apparatus in claim 15 further comprises “a control processor powered by the power supply.” The Accused Kits include a module with a STM32F413 or STM32H725 control processor powered by the power supply.

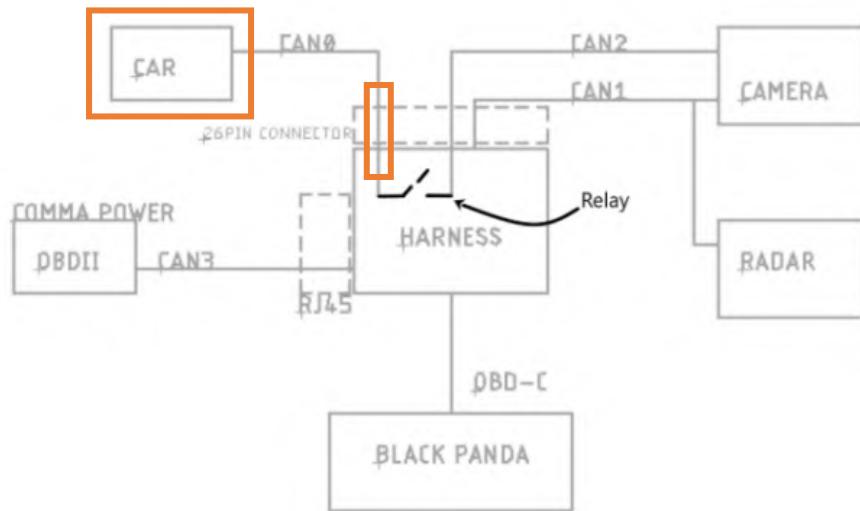


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²² <https://blog.comma.ai/our-hardware-future/>

²³ <https://comma.ai/shop/products/comma-three-logic-board>

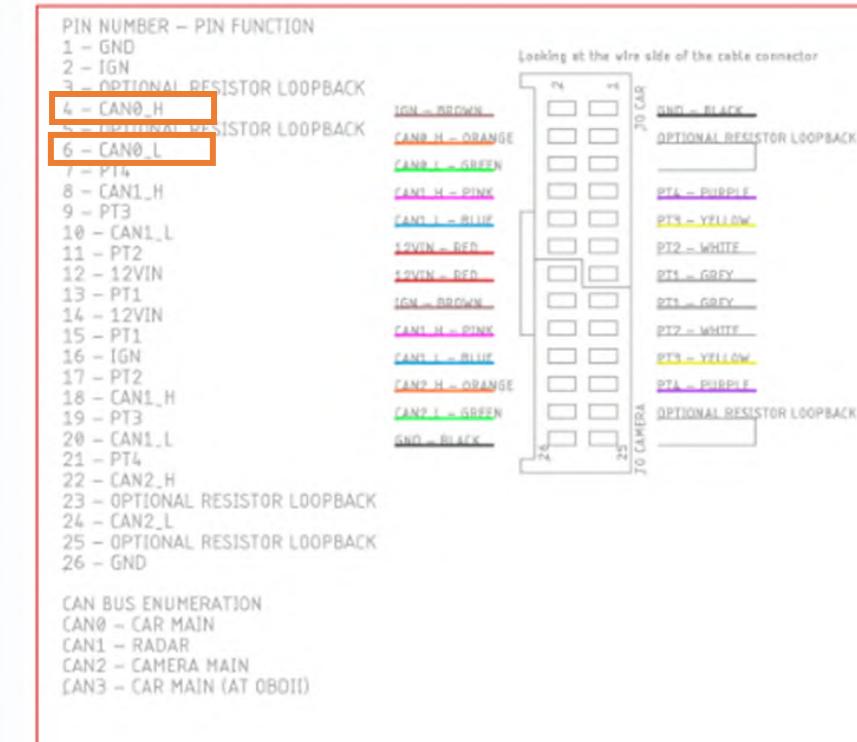
d. The apparatus in claim 15 further comprises “a first CAN bus terminal for electrically connecting the retrofit apparatus to a first factory-installed apparatus.” Pins 4 and/or 6, labeled “CAN0,” connect the retrofit apparatus to the vehicle’s power steering control module or powertrain control module, i.e., the “first factory-installed apparatus.” This is illustrated by the following:



CAN Network Topology with Car Harness

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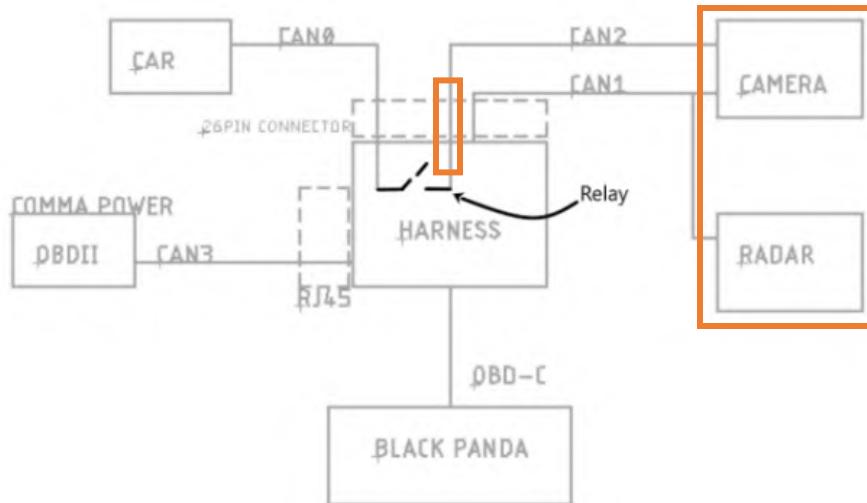
²⁴ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>



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e. The apparatus in claim 15 further comprises “a second CAN bus terminal for electrically connecting the retrofit apparatus to a second factory-installed apparatus.” Pins 22 and 24 of the Accused Kit’s connector, labeled “CAN2,” connect the retrofit apparatus to the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus.” This is illustrated by the following:

²⁵ <https://blog.comma.ai/our-hardware-future/>



CAN Network Topology with Car Harness

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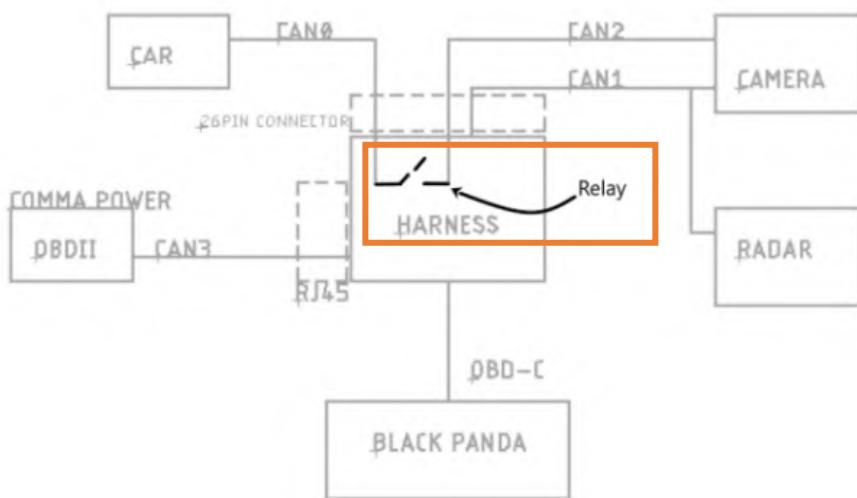
PIN NUMBER – PIN FUNCTION		Looking at the wire side of the cable connector	
1	GND		
2	IGN		
3	OPTIONAL RESISTOR LOOPBACK		
4	CAN0_H	10N – BROWN	
5	OPTIONAL RESISTOR LOOPBACK	CAN0_H – ORANGE	
6	CAN0_L	CAN0_L – GREEN	
7	PT4	CAN0_H – PINK	
8	CAN1_H	CAN0_L – BLUE	
9	PT3	12VIN – RED	
10	CAN1_L	12VIN – RED	
11	PT2	IGN – BROWN	
12	12VIN	CAN1_H – PINK	
13	PT1	CAN1_L – BLUE	
14	12VIN	CAN2_H – ORANGE	
15	PT1	CAN2_L – GREEN	
16	IGN	GND – BLACK	
17	PT2		
18	CAN1_H		
19	PT3		
20	CAN1_L		
21	PT4		
22	CAN2_H		
23	OPTIONAL RESISTOR LOOPBACK		
24	CAN2_L		
25	OPTIONAL RESISTOR LOOPBACK		
26	GND		
CAN BUS ENUMERATION			
CAN0 – CAR MAIN			
CAN1 – RADAR			
CAN2 – CAMERA MAIN			
CAN3 – CAR MAIN (AT OBDII)			

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²⁶ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

²⁷ <https://blog.comma.ai/our-hardware-future/>

f. The apparatus in claim 15 further comprises “an electromechanical relay operatively connected to and controlled by the control processor, the relay being configured to selectively connect the first CAN bus terminal to the second CAN bus terminal.” The Accused Kits include an electromechanical relay operatively connected to and controlled by the STM32F413 or STM32H725 control processor. The relay is configured to selectively connect the first vehicle data bus terminal to the second vehicle data bus terminal. The state of the relay is selected by software executed in the STM32F413 or STM32H725 control processor. This is illustrated by the following:



CAN Network Topology with Car Harness

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This is the car harness. It sits in between your car's existing ADAS camera and the rest of the car, and allows, by default, passive pass through operation. The harness uses advanced relay technology to only break the pass through when the software says it's ready.

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²⁸ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

²⁹ <https://comma-ai.medium.com/our-hardware-future-eea980d8c3bd>

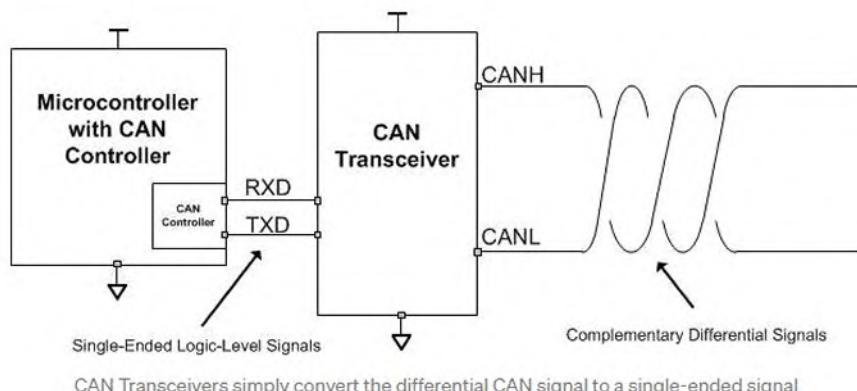
```

172     // C10: OBD_SBU1_RELAY (harness relay driving output)
173     // C11: OBD_SBU2_RELAY (harness relay driving output)
174     set_gpio_mode(GPIOC, 10, MODE_OUTPUT);
175     set_gpio_mode(GPIOC, 11, MODE_OUTPUT);
176     set_gpio_output_type(GPIOC, 10, OUTPUT_TYPE_OPEN_DRAIN);
177     set_gpio_output_type(GPIOC, 11, OUTPUT_TYPE_OPEN_DRAIN);
178     set_gpio_output(GPIOC, 10, 1);
179     set_gpio_output(GPIOC, 11, 1);

```

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g. Claim 15 further requires “a CAN bus interface powered by the power supply, the CAN bus interface being connected to the control processor and to the first CAN bus terminal and indirectly connected to the second CAN bus terminal through the relay only when the relay is closed.” The Accused Kits include several CAN bus interfaces in form of CAN transceivers that are connected to the STM32F413 or STM32H725 control processor. One of the CAN transceivers, CAN0 is connected to the first CAN bus terminal and indirectly connected to the second CAN bus terminal through the relay only when the relay is closed. This is illustrated by the following:

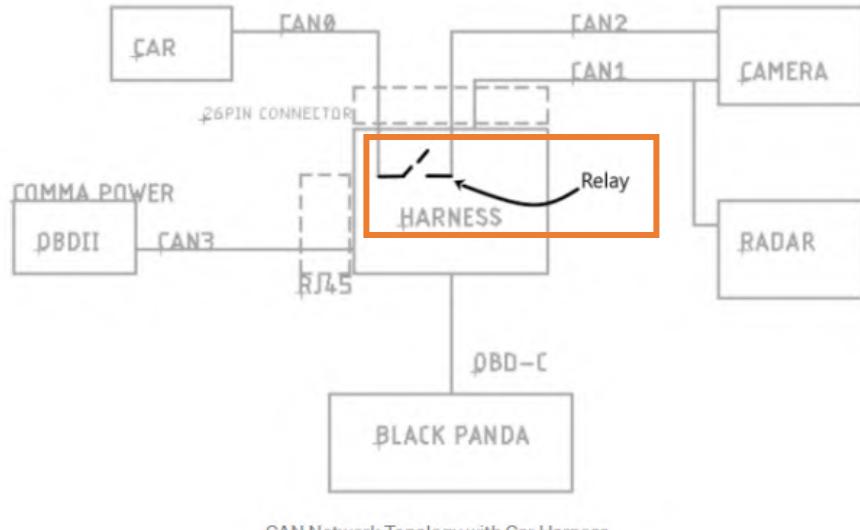


CAN Transceivers simply convert the differential CAN signal to a single-ended signal

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³⁰ <https://github.com/commaai/panda/blob/master/board/boards/uno.h>, accessed 06-Oct-2022

³¹ <https://wirelessnet2.medium.com/bitbanging-can-rx-on-black-panda-and-uno-bf815890bf7>



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h. Claim 15 further requires that “an original CAN bus message originating in the second factory-installed apparatus reaches the first factory-installed apparatus when the relay is closed and connects the first CAN bus terminal to the second CAN bus terminal.” In “Passthrough Mode,” the relay is closed and directly connects the vehicle’s factory-installed power steering control module or powertrain control module, i.e., the “first factory-installed apparatus,” to the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus.” An original CAN bus message originating in the factory-installed camera reaches the factory-installed power steering control module or powertrain control module. This is illustrated by the following:

³² <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

(unmodified) operation of the vehicle. This relay is a safety feature: When OpenPilot is not active, the relay defaults to a physically closed state, directly connecting the factory camera to the car main CAN and making the OpenPilot hardware invisible to the car. If the hardware were to crash or lose power, the relay would again default to a closed state. This physically closed state is called Passthrough Mode as signals are directly passed between the car and the factory camera with no intervention. The relay only opens and enters what's

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i. Claim 15 further requires that “the original CAN bus message originating in the second factory-installed apparatus does not reach the first factory-installed apparatus when the relay is open and disconnects the first CAN bus terminal from the second CAN bus terminal.” When the Accused Kits operate with its OpenPilot feature active, the relay is open disconnects the vehicle’s factory-installed power steering control module or powertrain control module, i.e., the “first factory-installed apparatus,” i.e., from the vehicle’s factory-installed camera, i.e., the “second factory-installed apparatus,” such that an original CAN bus message originating in the factory-installed camera does not reach the factory-installed power steering control module or powertrain control module. This is illustrated by the following:

factory camera with no intervention. The relay only opens and enters what's called Intercept Mode when the driver enables OpenPilot and the system has passed all of its internal health and safety checks. When the relay is physically open, the factory ADAS camera is isolated onto its own CAN bus and the Black Panda is performing selective forwarding and message injection to allow OpenPilot to control the car (just like with the white and grey pandas). The relay works in conjunction with stringent software-enforced safety code to ensure that the safe operation of a vehicle is never compromised.

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³³ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

³⁴ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

j. Claim 15 further requires that “the retrofit apparatus transmits a mimicked CAN bus message to the first factory-installed apparatus” and that “the mimicked CAN bus message has the same identifier as the original CAN bus message.” For example, the mimicked CAN bus messages include a vehicle acceleration CAN message or equivalent message. The mimicked CAN bus message uses the CAN identifier of the factory-installed camera. This is illustrated by the following:

car. To get around this, we can place the factory ADAS camera on its own isolated CAN bus and selectively forward messages between it and the car main CAN bus while injecting custom messages when needed. With this configuration, the OpenPilot computer can mimic the CAN ID of the factory ADAS camera when sending steer, brake, and accelerate commands to the car so the car thinks the factory camera is sending the messages.

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k. Claim 15 finally requires that “the mimicked CAN bus message is transmitted only after the relay disconnects the first CAN bus terminal from the second CAN bus terminal.” In the Accused Kits, the mimicked message is transmitted only after the relay disconnects the first CAN bus terminal from the second one. This is illustrated by the following:

```

221     int bus_rdr_car = (honda_hw == HONDA_BOSCH) ? 0 : 2; // radar bus, car side
222     bool stock_ecu_detected = false;
223
224     if (safety_mode_cnt > RELAY_TRNS_TIMEOUT) {
225         // If steering controls messages are received on the destination bus, it's an indication
226         // that the relay might be malfunctioning
227         if ((addr == 0xE4) || (addr == 0x194)) {
228             if (((honda_hw != HONDA_NIDEC) && (bus == bus_rdr_car)) || ((honda_hw == HONDA_NIDEC) && (bus == 0))) {
229                 stock_ecu_detected = true;
230             }
231         }

```

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³⁵ <https://wirelessnet2.medium.com/openpilot-an-overview-and-the-port-to-the-honda-clarity-16341d53c9aa>

³⁶ https://github.com/commaai/panda/blob/master/board/safety/safety_honda.h

20. Defendant has directly infringed and, on information and belief, is now directly infringing, literally or under the doctrine of equivalents, at least claims 1, 4, 8, 11, 12, and 15 of the '116 Patent by making, using, offering to sell, or selling in the United States, or importing into the United States, one or more Accused Kits.

21. As a result of Defendant's infringement of the '116 Patent, Plaintiff has suffered damages.

22. Defendant sells Accused Kits and/or vehicles incorporating Accused Kits.

23. Further, comma.ai collects data from Accused Kits and sells or offers to sell such data to third parties.

24. On information and belief, Defendant earns substantial sums from such sales.

25. Plaintiff is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement since it first had notice of the '116 Patent, but in no event less than a reasonable royalty, together with interest and costs as fixed by the court.

26. Furthermore, despite Defendant's knowledge of the '116 Patent and its infringement, Defendant has, on information and belief, continued to infringe the '116 Patent.

27. Accordingly, on information and belief, Defendant's infringement has been and is willful, thus entitling Plaintiff to enhanced (treble) damages.

JURY DEMAND

Plaintiff demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Plaintiff Success LLC respectfully requests that the Court rule in its favor and against Defendant comma.ai, Inc., and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant has infringed the '116 Patent;

B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '116 Patent and any continuing infringement through the date such judgment is entered, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts;

C. an order requiring Defendant to pay a royalty for any continued infringement after the date judgment is entered;

D. an award of treble damages under 35 U.S.C. § 284;

E. any injunctive relief to which Plaintiff may be entitled; and

F. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys' fees.

Dated: October 14, 2022

Respectfully submitted,

Of Counsel:

Maxwell Goss
Fishman Stewart PLLC
800 Tower Dr., Suite 610
Troy, Michigan 48098
Office: (248) 594-0604
mgoss@fishstewip.com

/s/ George Pazuniak
George Pazuniak (DE Bar 478)
O'Kelly & O'Rourke, LLC
824 N. Market St.,
Suite 1001A
Wilmington, DE 19801
D: 207-359-8576
Email: GP@del-iplaw.com

Attorneys for Plaintiff